



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,033	10/24/2005	Hans Rosenberg	9342-43	5915

54414 7590 10/31/2006

MYERS BIGEL SIBLEY & SAJOVEC, P.A.
P.O. BOX 37428
RALEIGH, NC 27627

EXAMINER

PHAN, THO GIA

ART UNIT PAPER NUMBER

2821

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/533,033

Applicant(s)

ROSENBERG ET AL.

Examiner

Tho G. Phan

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-11 and 13-18 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/24/05</u> (<u>4/28/05</u>) | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

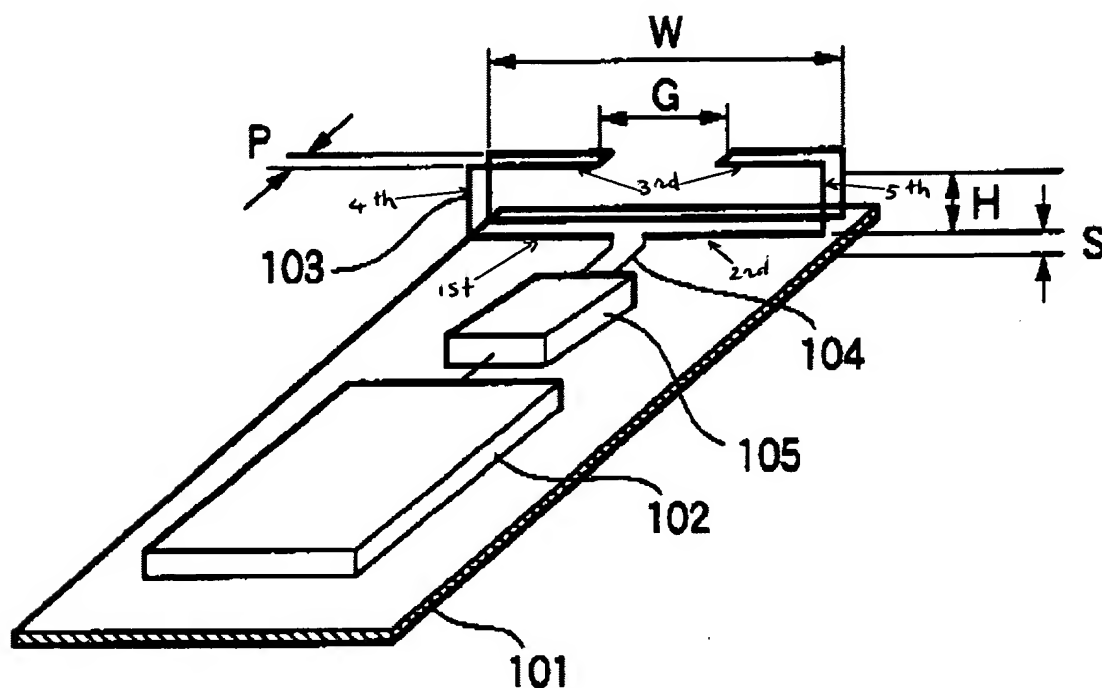
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 3, 8-10, 13-14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Koyanagi et al (6,697,025).

Koyanagi et al in figures 1-15 disclose a loop antenna element 103 including a first section (see attached figure 7) provided in and extending a length in a first plane, a second section spaced from and provided in and extending a length in the first plane, where the second section extends along the same line as the first section, a third section provided in a second plane essentially parallel to the first plane and essentially aligned with the first and second sections, and a fourth and a fifth section interconnecting antenna sections provided in the first and second planes, wherein the antenna sections form a three-dimensional structure having a substantial two-dimensional extension in at least one of the first and second planes, wherein the first section has a first feeding end and the second section has a second feeding end (via feed line 104) both provided in the first plane close to each other, wherein the length of the loop antenna corresponds to a full wavelength (abstract) of an centre frequency in

Art Unit: 2821

a desired frequency band, a printed circuit board 101 including a ground plane (column 3, lines 59-63) and radio circuits 102, 105 for the loop antenna element, wherein the antenna element sections are provided along the sides of and bound by the printed circuit board.

FIG.7

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2821

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 11 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi et al in view of Capp et al (5,300,937).

Koyanagi et al have been discussed above but fail to teach the three-dimensional antenna structure at least partly encloses an area in the first plane where a component can be placed and wherein the antenna is provided along at least half of the perimeter of the printed circuit board/dielectric material. However, Capp et al in figures 1-3 disclose the loop antenna 101,201/202, 301/302 at least partly encloses an area in the first plane where a component 304 can be placed and wherein the antenna is provided along at least half of the perimeter of the printed circuit board 303. It would have been obvious to employ Koyanagi et al with the three-dimensional antenna structure at least partly encloses an area in the first plane where a component can be placed and wherein the antenna is provided along at least half of the perimeter of the printed circuit board/dielectric material for the purpose of increasing the effective area of the loop antenna so as to maximize the gain (see abstract).

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi et al in view of Filimon et al (5,678,202).

Koyanagi et al have been discussed above but fail to teach the portable communication device is a headset. However, Filimon et al in figure 1 disclose the

portable communication device is a headset (column 3, lines 15-22). It would have been obvious to employ the portable communication device is a headset as taught by Filimon et al for the purpose of providing a hands-free operation.

Allowable Subject Matter

5. Claims 4-7 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Li et al and Lee are cited as of interested and illustrated a similar structure to a wireless communication antenna device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho G. Phan whose telephone number is 571-272-1826. The examiner can normally be reached on M-F, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callahan Timothy can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

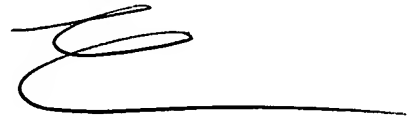
Art Unit: 2821

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tho G Phan', with a long horizontal flourish extending to the right.

Tho G Phan
Primary Examiner
Art Unit 2821